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### REMARKS

It appears that the specification has been objected to on the basis of improper usage of certain trademarks, including CHELEX 100, AW 500 and AG 50W-X8. The specification has been amended to capitalize these trademarks and include the appropriate generic terminology.

Claim 9 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 9 to remove the single occurrence of the word "metal." It is asserted that this amendment provides proper antecedent basis, does not change the scope of meaning of the claim and is not being made for purposes related to patentability. Reconsideration and withdrawal of this rejection is requested.

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over DeFillippi '925 or Lehto, et al., "The Ion exchange of strontium on sodium titanate..." or the instantly recited sodium nonatitanate from Honeywell, IL on instant pg. 9, line 8 of the specification. The Examiner has asserted that DeFillippi (columns 3 and 4), Lehto, et al. ("Lehto")(page 2), and perhaps even the reference in the present specification to a Honeywell product (Specification, page 9, line 8), suggest the instantly claimed support medium comprising sodium nonatitanate, and that the burden of proof is on Applicant to establish that the products disclosed by DeFillippi and Lehto do not necessarily or inherently possess the characteristics of the instantly claimed products. (See Office Action mailed April 2, 2003 at page 3, citing *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1997)).

In the decision referred to as *In re Best*, the United States Court of Customs and Patent Appeals restated the burden of proof required to overcome an inherency rejection. *Id.* at 1254-5 (citing *In re Swinehart*, 58 CCPA 1027, 439 F.2d 210, 169 USPQ 226 (1971)). The Court said:

[It] is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

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This burden was involved in *In re Ludtke*, 58 CCPA 1159, 441 F.2d 660, 169 USPQ 563 (1971), and is applicable to product and process claims reasonably considered as possessing the allegedly inherent characteristics.  
*In re Swinehart*, 58 CCPA at 1031, 439 F.2d at 212-13, 169 USPQ at 229.

The Court also said that “[w]hether the rejection is based on ‘inherency’ under 35 USC 102, on ‘prima facie obviousness’ under 35 USC 103, jointly or alternatively, the burden of proof is the same . . .” *In re Best*, at 1255 (citing *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972)).

Applicant asserts that the products disclosed by DeFillippi, Lehto, and Honeywell do not necessarily or inherently possess the characteristics of the instantly claimed products. The DeFillippi and Lehto disclosures deal with the ability of sodium nonatitanates to sequester strontium. Accordingly, the characteristics of the sodium nonatitanates prepared by DeFillippi and Lehto were supposed to have a high affinity for strontium without regard for the affinity that the sodium nonatitanate would have for rubidium. Accordingly, neither DeFillippi nor Lehto calculate a separation factor between strontium and rubidium as set out in present claims. Furthermore, the sodium nonatitanate materials disclosed by either DeFillippi or Lehto do not inherently possess the characteristic of having a strontium/rubidium separation factor greater than 1,000 as set out in claim 1, as amended to include the limitation of former claim 4. A separation factor is defined in the specification at page 12, saying that separation factors for the strontium/rubidium selectivity are “calculated by dividing the strontium  $K_d$  by the rubidium  $K_d$  . . .” When calculating a strontium/rubidium separation factor, the strontium  $K_d$  and the rubidium  $K_d$  must be determined at the same pH.

DeFillippi describes sodium nonatitanate materials that exhibit a strontium/rubidium separation factor of about 10 under alkaline conditions (pH between 9.95 and 11.14). This separation factor for the sodium nonatitanate product is determined by dividing the strontium  $K_d$  of 6,570 by the rubidium  $K_d$  of 658 (See Table 2 in column 12).

Lehto describes sodium nonatitanate materials that exhibit a strontium/rubidium separation factor of about 280 at a pH of 6. The separation factor for this sodium nonatitanate product is determined by dividing the strontium  $K_d$  of 56,000 by the potassium  $K_d$  (a surrogate for rubidium)

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of 200 (See Table 1 on page 11).

Honeywell is referred to in the Applicant's specification as a product that was compared to the sodium nonatitanate products being claimed by Applicant. However, Applicant has already compared the strontium/rubidium separation factor provided by these separate products as set out in Table 5 (Specification pages 15-16). The sodium nonatitanate obtained from Honeywell yielded a strontium/rubidium separation factor of 12,500, whereas the sodium nonatitanate of the present claims yielded strontium/rubidium separation factors ranging from 59,200 to 141,000.

Applicant has amended claim 1 to state that the sodium nonatitanate is characterized by a strontium/rubidium separation factor greater than 12,500 at an alkaline pH. While the specification does not expressly state a separation factor "greater than 12,500", an inventor may excise the prior art from the claim and still satisfy the written description requirement of section 112, first paragraph. *In re Johnson*, 558 F.2d 1008, 194 U.S.P.Q. 187 (C.C.P.A. 1977). Applicant asserts that it would be an absurdity for the law to require, and an impossible task to accomplish, that an applicant must expressly disclose everything that is not in her compositions or every step that is not included in her methods. It is for the inventor to decide what bounds of protection she will seek and it is perfectly legitimate for an inventor to simply claim less than the full scope of her disclosure. For all the reasons cited, Applicant asserts that the limitation "greater than 12,500" does not introduce new matter.

Therefore, Applicant has shown that the sodium nonatitanate products of DeFillippi, Lehto, and Honeywell do not inherently possess the characteristics of the products of instant claim 1. Furthermore, present claims 2, 3 and 5 depend from claim 1. These dependent claims are asserted to be patentable for the same reasons as set out for claim 1. Reconsideration and withdrawal of the rejection is requested.

Applicant has also submitted new claims 16-57 that are dependent from the independent claims that have already been examined. Consideration and allowance of these additional claim is requested.

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In the event there are additional charges in connection with the filing of this Response, the Commissioner is hereby authorized to charge the Deposit Account No. 50-0714/LYNN/0119 of the firm of the below-signed attorney in the amount of any necessary fee.

Respectfully submitted,



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